

WHAT IS CLAIMED IS:

1. A method of aligning at least two components so that the components are aligned along at least one of three dimensional axes, comprising:
  - attaching a first adapter on a non-adjusting component;
  - placing a first line generator laser holder on the first adapter to produce a first visible line;
  - attaching a second adapter on an adjusting component; and
  - placing a second line generator laser holder on the second adapter for producing a second visible line, wherein the visible lines determine an angle of azimuth of the components.
2. The method according to claim 1, further comprising:
  - placing a digital protractor in a first position on the first adapter;
  - placing the digital protractor in a second position on the first adapter, the second position being oriented perpendicular to the first position; and
  - reading the digital protractor to determine angles of pitch and roll of the non-adjusting component.
3. The method according to claim 1, further comprising:
  - measuring distances between the visible lines generated by the first and second laser holders at first and second positions; and
  - comparing the measurements at the first and second positions to determine the azimuth.
4. The method according to claim 3, wherein the step of measuring the distances at the first and second positions occurs near the line generator laser holders and away from the line generator laser holders, respectively.
5. The method according to claim 3, further comprising adjusting the position of the adjusting component to produce the same measurements as the non-adjusting component.
6. The method according to claim 3, further comprising placing a digital protractor in a first position on the second adapter and in a second position on the second adapter that is perpendicular to the first position, to measure the pitch and roll of the adjusting component.
7. The method according to claim 6, further comprising:
  - comparing the measured pitch and roll of the adjusting component with the non-adjusting component; and

adjusting the position of the adjusting component until the measured pitch and roll of the adjusting component are the same as the non-adjusting component.

8. The method according to claim 2, wherein the first and second adapters each includes two perpendicular grooves for fitting the digital protractor.

9. The method according to claim 2, wherein the first and second adapters each includes a slot for fitting the corresponding line generator laser holder.

10. The method according to claim 9, wherein the laser line generator holder fitted in the slot can be rotated in increments of 90 degrees so as to measure the angles of the components that are perpendicular or opposite to a base reference line.

11. An alignment system for aligning adjustable and non-adjusting components along at least one of three dimensional axes, comprising:

a first adapter for attaching to the non-adjusting component, the first adapter having two perpendicular grooves and a slot;

a second adapter for attaching to the adjusting component, the second adapter having two perpendicular grooves and a slot that correspond in position to the grooves and slot in the first adapter;

a first laser line generator holder mountable in the slot of the first adapter for generating a first laser line;

a second laser line generator mountable in the slot of the second adapter for generating a second laser line to determine its parallelism to the first laser line; and

a digital protractor mountable in the first and second grooves of the first and second adapters to measure pitch and roll of the non-adjusting and adjusting components.

12. The alignment system according to claim 11, wherein distances between the first and second laser lines generated by the first and second laser line generators are measured in two positions to determine an azimuth angle, wherein one position is near the laser holders and the other position is away from the laser holders.

13. The alignment system according to claim 12, wherein the position of the adjusting component is adjusted to produce the same pitch, roll, and azimuth angles as the non-adjusting component.

14. The alignment system according to claim 1, wherein the laser holders mountable in the slot of the adapters can be rotated in increments of 90 degrees so as to measure the angles of the components that are perpendicular or opposite to a base reference.